

8. *Colinus atriceps* (Ogilvie-Grant). Black-headed Bob-white. Putla, western Oaxaca. (About 4000 feet.)

9. *Colinus salvini* Nelson. Salvin's Bob-white. Coast plains of southern Chiapas, near Guatemalan border. (Sea level to 500 feet.)

10. *Colinus insignis* Nelson. Guatemala Bob-white. Valley of Comitán in Chiapas, into adjacent border of western Guatemala. (3000-6000 feet.)

11. *Colinus nigrogularis* (Gould). Yucatan Bob-white. Yucatan. (Sea level to 500 feet.)

SUMMER BIRDS OF SITKA, ALASKA.

BY JOSEPH GRINNELL.

THE WELL-KNOWN humidity of the Northwest Coast apparently reaches its extreme in the region about Sitka. The temperature is moderate throughout the year, and this, together with the excessive moisture, favors the growth of the heavy coniferous forests which cover almost every bit of land from the sea-level up to the lower limit of the summer snows on the mountains. Every one of the hundreds of small islands which convert Sitka Bay into an intricate network of narrow channels, is densely timbered, even to the water's edge.

However, along the shores, especially at the heads of the numerous inlets where the streams enter the ocean, are narrow strips of shorter vegetation, such as alders and salmonberry bushes. These small tracts of deciduous growth, together with the taller timber immediately adjoining, are the localities most frequented by the smaller land birds. In fact, the dark mossy forests but a few rods back from the coast are almost destitute of bird life.

For the most part the shores are rocky and the land rises directly out of the water, so there are few beaches. Indian River is a swift mountain stream which rises among the snow-capped peaks scarcely ten miles to the northward, and enters the sea a half mile east of Sitka. At its mouth are rather extensive sandy tideflats and bars, which are about the only ones in the vicinity and so form an important attraction to the Waders.

A few of the smaller islands farthest out to sea, are inhabited by water birds. St. Lazaria Island is twenty miles southwest of Sitka, and is the one in this region chosen by thousands of sea-birds as a breeding-ground. It is irregularly shaped, about a quarter of a mile in length by three hundred yards in its broadest part. The rocky sides are broken and precipitous, and are the resorts of the Murres, Guillemots and Cormorants. The island is mostly crowned by a heavy growth of large firs and hemlocks, but around the margins sloping down to the brink of the cliffs there is a rank growth of tall grasses. The Gulls and Puffins prefer these grassy banks as nesting places, while the Petrels' burrows are most numerous within the timbered portion.

My observations in the vicinity of Sitka were continuous from June 8 to August 24, 1896. During that time I collected many birds nearly all of which were summer residents, a few early migrants being taken during the last few weeks of my stay. The present list is the result of these collections and observations, and its value principally lies in the fact that the known geographical and breeding range of several of the species is more or less extended.

No birds are included of which specimens were not taken, so that the identity is correct, so far as I am aware. Pigeon Hawks, presumably *Falco columbarius suckleyi*, were observed on several occasions but were not secured. Also a Duck Hawk was noted. Ptarmigan and Grouse were reported as being common, the former breeding at the snow line on the mountains immediately back of Sitka. All my efforts to obtain specimens, either personally or from the Indians, were unsuccessful. The 'Siwashes' always brought them in with their necks wrung and most of the feathers plucked.

Unless otherwise noted, all specimens were taken in the vicinity of Sitka.

Professor H. H. Hindshaw of the University of Washington, Seattle, who was at Sitka during part of the summer, collected many birds and he has kindly allowed me to use his notes. Credit is duly given him for such as are included in this list.

I here have an opportunity to express my thanks to Mr. Fred Frohese of Sitka for his aid and friendship during my residence

there, and I would recommend him to anyone visiting Sitka as a most hospitable gentleman, and one who will give heartily any needed information or assistance.

Finally, to Mr. Robert Ridgway and Mr. William Palmer of the National Museum, I am greatly indebted for the identification of specimens, and for suggestions in regard to this paper.

1. *Gavia imber*. LOON.—Several seen; the Indians brought them in frequently.

2. *Gavia pacificus*. PACIFIC LOON.—One specimen, a female, was shot June 26, by Dr. Wilber, of the Mission Hospital. It is in full adult plumage.

3. *Gavia lumme*. RED-THROATED LOON.—Prof. Hindshaw took a fine pair of these Loons, together with a single downy young, on a grass-margined pond a few rods back of Sitka. No nest was seen, and the young bird, though apparently only a few days old, was able to dive in the most energetic style. Previously there had been no sign of the Loons about the lake during the day, but every morning and evening one of them would be seen flying to or from the lake, circling high overhead, and uttering its lunatic laugh.

4. *Lunda cirrhata*. TUFTED PUFFIN.—Swarming by the thousands and breeding on St. Lazaria Island. Every grassy bank on the sides of the island were riddled with their burrows. On June 17, these burrows contained fresh eggs, and on July 7, the eggs contained large embryos.

5. *Fratercula corniculata*. HORNED PUFFIN.—Not at all common; 12 were taken at St. Lazaria Island, and but a few others seen. I saw them enter crevices in the cliffs, and in one instance a burrow in a steep bank, among those of the Tufted Puffin. So they were probably breeding.

6. *Cerorhinca monocerata*. RHINOCEROS AUKLET.—Two pairs of these Auks were taken out in the bay on July 21, by my Indian, and several more were seen. The state of the reproductive organs and the bare area on the breast indicated that these birds were incubating, though where, I did not ascertain.

7. *Cyclorhynchus psittacus*. PAROQUET AUKLET.—A single adult male was taken June 8, by Mr. Frobese, and presented to me. It was the only one seen.

8. *Brachyramphus marmoratus*. MARBLED MURRELET.—Very common about the numerous inlets and bays, and a large series was taken, including several in immature plumage. They were evidently breeding, though, as I learned afterwards, on some islands over thirty miles distant. (See 'Osprey,' May, 1897.)

9. *Cephus columba*. PIGEON GUILLEMOT.—Very common along the rocky shores of the outlying islands. On August 4, these birds seemed about to begin nidification, as they were carrying grasses to nests in

niches under boulders and on the sides of the cliffs. I found no eggs, although many nests were examined.

10. *Uria troile californica*. CALIFORNIA MURRE.—Numerous among the outlying islands. Many nearly fresh eggs were secured on July 28.

11. *Rissa tridactyla pollicaris*. PACIFIC KITTIWAKE.—Common about the inland bays and narrows; although many specimens were taken, not only in immature plumage, but in full adult, none showed any signs of breeding.

12. *Larus glaucescens*. GLAUCOUS-WINGED GULL.—The common Gull of Sitka Bay, and the only one found breeding. The nests were slight hollows in the ground among the tall grass on the higher parts of the islands. These nest-hollows contained a slight lining of dry grasses. Two or three eggs constituted a set. Fresh eggs were found from June 16 to August 4.

13. *Larus philadelphia*. BONAPARTE'S GULL.—One specimen, an immature male, was brought in by my Indian July 21. It was shot out in the open bay and was the only one seen. These small Gulls were very numerous on some parts of the steamer passage from Killisnoo and Juneau, south to Queen Charlotte Sound, August 25-27.

14. *Puffinus griseus*. DARK-BODIED SHEARWATER.—A female was brought in by the Indian on July 15, and another, July 21. He reported seeing several others. They were in the open bay. As far as I am aware, this is the first recorded instance for Alaska.

15. *Oceanodroma furcata*. FORK-TAILED PETREL.—Breeding in considerable numbers on St. Lazaria Island, where on June 17, most of the eggs were badly incubated, and several young were taken. (See 'Nidologist,' March, 1897.)

16. *Oceanodroma leucorhoa*. LEACH'S PETREL.—Breeding in immense numbers on St. Lazaria Island, where the eggs were fresh on

MEASUREMENTS OF *O. leucorhoa* FROM ST. LAZARIA ISLAND.

No. Coll. J. G.	Sex.	Date.	Wing.	Tail.	Forking of Tail.	Tarsus.
1138	♂	June 17	5.70	3.00	.75	.92
1307	♀	July 7	5.75	3.10	.80	.84
1309	♀	July 7	5.85	3.10	.70	.87
1310	♀	July 7	5.85	3.10	.70	.90
1437	♀	August 5	6.10	3.30	.90	.95
1440	♀	August 5	5.90	3.10	.80	.87
1441	♀	August 5	6.00	3.20	.70	.92
1438	♀	August 5	5.75	3.10	.70	.90
1439	♀	August 5	6.10	3.30	.90	.93
1311	♀	July 7	5.60	2.95	.65	.89
Average.....			5.86	3.12	.76	.90

June 17. This Petrel outnumbered the last approximately 5 to 1. (See 'Nidologist,' March, 1897.)

Mr. Palmer, on comparing my Sitka birds with Atlantic specimens, finds the former averaging smaller, but otherwise similar. About half have considerable dusky white at the base of the rectrices.

17. *Phalacrocorax pelagicus robustus*. VIOLET-GREEN CORMORANT. — Breeding abundantly on the more exposed outlying islands. The immature birds and others not breeding remained in flocks about the rocks and reefs further inland. The nests were usually situated on the shelves of rock on the perpendicular sides of the islands. I noted a row of 15 nests in a single transverse crevice on the face of a promontory. The nests are deeply saucer-shaped and compactly made of grass and turf. The eggs are 2 to 4 in number, oftener 3, and resemble other Cormorants' eggs except in size, being on an average considerably smaller. Six selected sets containing the extremes measure: 2.20×1.38 , 2.08×1.41 , 2.19×1.50 , 2.26×1.46 ; — 2.05×1.40 , 2.09×1.39 , 2.17×1.44 , 2.15×1.46 ; — 2.13×1.37 , 2.07×1.38 , 2.10×1.37 ; — 2.22×1.49 , 2.28×1.43 , 2.23×1.48 ; — 2.42×1.47 , 2.43×1.40 , 2.37×1.45 ; — 2.52×1.44 , 2.11×1.40 , 2.07×1.42 . The average of fifty eggs is 2.19×1.42 . This Cormorant nests late; a few fresh eggs were taken on July 8, and many slightly incubated, on July 28.

18. *Merganser serrator*. RED-BREASTED MERGANSER. — One shot on August 18, by Professor Hindshaw, and others seen. Young in down were brought in by the Indians early in July.

19. *Aythya marila nearctica*. AMERICAN SCAUP DUCK. — Large numbers in flocks remained all summer among the inside islands. Apparently but a few bred. A juvenile nearly fledged was brought in on July 15.

20. *Histrionicus histrionicus*. HARLEQUIN DUCK. Quite numerous on the most exposed outlying reefs about which large flocks of nearly fledged young appeared by August 5, when many were shot. I saw an adult in June, two or three miles up Indian River, where it was probably nesting.

21. *Oidemia deglandi*. WHITE-WINGED SCOTER. — Common among the outlying islands in flocks of six to a dozen. No young seen.

22. *Oidemia perspicillata*. SURF SCOTER. — An adult male, taken July 28, was the only one observed.

23. *Ardea herodias*. GREAT BLUE HERON. — Frequent along the secluded inland shores. Nearly fledged young brought in July 2.

24. *Phalaropus lobatus*. NORTHERN PHALAROPE. — Arrived August 3, after which it became very numerous about the kelp-beds and tidedrifts out in the bay.

25. *Tringa bairdii*. BAIRD'S SANDPIPER. — Prof. Hindshaw took a specimen August 16, the only one observed.

26. *Tringa minutilla*. LEAST SANDPIPER. — First specimen taken July 2, after which it became common in small flocks on the sandbar at the mouth of Indian River.

27. *Ereunetes occidentalis*. WESTERN SANDPIPER. — First specimens

taken July 6. Soon afterwards common on the sandbars at Indian River.

28. *Heteractitis incanus*. WANDERING TATTLER.—A pair taken on an exposed rocky islet 28 miles south of Sitka on August 4, and two others seen.

29. *Charadrius dominicus*.—AMERICAN GOLDEN PLOVER. An immature male, taken by Prof. Hindshaw on August 16, was the only one observed.

30. *Ægialitis semipalmata*. SEMIPALMATED PLOVER.—Common after July 25, in company with *Ereunetes occidentalis*, on the sand-bar at Indian River.

31. *Aphriza virgata*. SURF BIRD.—Sixteen taken from a flock on a rocky islet on July 21. These were all apparently immature birds, that is, non-breeders of the second year.

32. *Arenaria melanocephala*. BLACK TURNSTONE.—Several taken July 21, and a few others noted occasionally afterwards on the bar at Indian River. Single individuals were quite frequently flushed from the rocky reefs at low tide. The specimens obtained are in slightly worn adult plumage.

33. *Hæmatopus bachmani*. BLACK OYSTER-CATCHER.—Companies of from three to a dozen or more were common on all the exposed reefs and rocks. Broken egg-shells were found in a depression among the pebbles on an islet on June 16.

34. *Accipiter velox*. SHARP-SHINNED HAWK.—Noted on several occasions on the wooded mountain sides. Noisy young were following their parents on August 5.

35. *Accipiter cooperi*. COOPER'S HAWK.—Several seen during the second and third weeks of August. A badly decomposed specimen, the wings and feet of which are saved, was found on the beach August 20.

36. *Accipiter atricapillus striatulus*. WESTERN GOSHAWK.—Mr. Frobese shot an immature male on August 5, and others were seen after that date.

37. *Haliæetus leucocephalus alascesis*. ALASKAN BALD EAGLE.—Common along the coasts throughout the Sitkan District. The nests were to be seen built in tall fir-trees on nearly every promontory. The young had not left their nests on August 5.

38. *Ceryle alcyon*. BELTED KINGFISHER.—Tolerably common along the coasts after its first appearance, July 28.

39. *Dryobates villosus harrisii*. HARRIS'S WOODPECKER.—A few seen in the scattering timber in the immediate vicinity of Sitka, where they doubtless breed. The only specimen secured was an adult male, on July 4.

40. *Colaptes cafer saturator*. NORTHWESTERN FLICKER.—Noted occasionally about Sitka in the dense forest a mile or more back from the beach. I was informed that both this form and *Colaptes auratus* became quite numerous in the fall. The fancy dance costumes of the Indians were often ornamented with the tail-feathers and wings of both species.

41. *Selasphorus rufus*. RUFOUS HUMMINGBIRD. — Tolerably common in the more open clearings about Sitka, and along the quiet shores of secluded inlets. A nest containing eggs nearly hatched was found on June 10. It was 5 feet above the ground on the horizontal branch of a small fir.

42. *Empidonax difficilis*. WESTERN FLYCATCHER. — Common throughout the deep forests which border the streams. They remained for the most part in the upper foliage of the tall trees, and consequently were not easily seen, but their characteristic notes nearly always betrayed their presence. A female was taken June 30 which contained an egg ready to be laid. By the first of August the young with their parents appeared about Sitka in the clearings, and were then easily observed. The habits and notes of *E. difficilis* in Alaska seemed to be substantially the same as those of our Southern California birds.

43. *Cyanocitta stelleri*. STELLER'S JAY. — Common along the edge of the timber near the shore wherever I landed. By concealing one's self and imitating their callnote, their curiosity seemingly overcomes them, and they quietly come within a few feet to investigate. In this way I succeeded in collecting a series of 30 birds which are usually very wary and difficult to approach. The first young were taken on July 4.

44. *Corvus corax principalis*. NORTHERN RAVEN. — An abundant and well-known scavenger. It congregates about the streets of Sitka and along the beaches with as much familiarity as Black Vultures are said to do in the South. Although apparently so tame they are extremely cautious and wary, and the mere sight of a gun is sufficient to send every Raven flopping off with loud calls of alarm. I did not learn of its breeding anywhere about Sitka.

45. *Corvus caurinus*. NORTHWEST CROW. — Common on the small islands in the bay, especially so on St. Lazaria Island where the young and eggs of the Sea-birds constituted its staple articles of food. Nearly fledged young were observed on June 17, on that island.

46. *Loxia curvirostra minor*. AMERICAN CROSSBILL. — Flocks of these birds frequented the tops of the tallest firs, where on account of their quietness that may easily escape notice. The six specimens taken are of the small Northwest Coast form.

47. *Junco hyemalis oregonus*. — OREGON JUNCO. — Numerous in the open brushy localities. First juveniles, just out of the nest, taken June 11. This Junco was one of the commonest land-birds about Sitka, and by the first of August had gathered into small flocks which came into town and foraged familiarly about the streets.

48. *Melospiza fasciata rufo*. SOOTY SONG SPARROW. — Tolerably common in the brushy or grassy margins of the forests along the beaches. They were most numerous on St. Lazaria Island in the tall grass which grows so luxuriantly on portions of the island. Fully fledged young were taken on July 7.

49. *Melospiza lincolni*. LINCOLN'S SPARROW. — Two or three pairs

bred in the grassy margins of the pond back of Sitka. A juvenile about one third grown was taken on June 25. It was hidden in the matted grass, and was discovered by following the call-note, which was a ventriloquial, insect-like chirp, hard to locate. A single adult bird was secured, a female, on June 25. In a letter to Mr. Palmer, Mr. William Brewster writes concerning this specimen : —

“Your Lincoln’s Sparrow from Sitka, Alaska, agrees closely with my types of *M. c. striata* in respect to the streaking of the upper parts, but it is less olivaceous and the buffy is less rich and deep. Making due allowance for seasonal and individual variation, I should think it not improbable that it may represent the breeding plumage of *striata*, but it would be of course unsafe to assume this positively on the strength of a single specimen.”

50. *Passerella iliaca unalaschcensis*. TOWNSEND’S SPARROW. — Common in tall grass on St. Lazaria Island, where half-fledged young were observed on June 16. The song of this Sparrow is very musical, being loud and full like that of a Grosbeak, and yet with the intonation of a Song Sparrow.

51. *Chelidon erythrogastra*. BARN SWALLOW. — Breeding abundantly about town under the eaves of buildings; a few pairs found nesting on cliffs on the islands out in the bay.

52. *Tachycineta bicolor*. TREE SWALLOW. — Breeding commonly in old woodpecker holes in the tall dead firs at the foot of the mountains back of Sitka. Full-grown young with their parents appeared along the beaches by July 15. Soon after, they gathered in small flocks and were not seen after August 1, having evidently migrated.

53. *Helminthophila celata lutescens*. LUTESCENT WARBLER. — Tolerably common about clearings, and in the low growths of firs which border the beaches at the mouths of the streams. The males were in full song until the last of July. Full grown young observed on August 17.

54. *Dendroica æstiva rubiginosa*. ALASKAN YELLOW WARBLER. — A single adult male taken June 23, and a few others heard previously in the dense firs along Indian River.

55. *Dendroica townsendi*. TOWNSEND’S WARBLER. A single adult female taken August 14, and two others seen at the same time. They were in company with a flock of Chickadees and were rapidly hunting insects towards the extremities of fir boughs. They were probably migrants.

56. *Sylvania pusilla pileolata*. PILEOLATED WARBLER. — An adult male was taken on August 18, and several others, including juveniles, seen on August 21. They were in low brush along the shores of a secluded bay where they had probably bred.

57. *Anthus pensilvanicus*. AMERICAN PIPIT. A pair seen on a grassy tideflat beyond Indian River on June 10, and the female secured. From the condition of the ovaries, I judged that it would have laid eggs within a week.

58. *Troglodytes hiemalis pacificus*. WESTERN WINTER WREN.—Tolerably common in the more open forests, particularly where there was much recently-fallen timber. Especially numerous on St. Lazaria Island where their clear sprightly songs constantly uttered, seemed scarcely in accord with the harsh cries of the thousands of Sea-fowl.

59. *Certhia familiaris occidentalis*. CALIFORNIAN CREEPER.—Seen only in the tall timber along Indian River where I secured six specimens and saw several others. On July 2 took two scarcely fledged juveniles, apparently just out of the nest.

60. *Parus rufescens*. CHESTNUT-BACKED CHICKADEE.—Common everywhere, especially in the younger firs at the heads of the bays and inlets. First young fully fledged, taken June 26.

61. *Regulus satrapa olivaceus*. WESTERN GOLDEN-CROWNED KINGLET.—Common everywhere, particularly in the dense fir thickets along the streams. On June 22, I observed the first young. On that date, as I was carefully picking my way through a clump of firs, I chanced upon six of these mites of birds sitting in a row close together on a twig; but when one of the parents appeared and discovered me, her single sharp note scattered them in all directions with a chorus of squeaks, and then in a moment all was quiet and not one to be seen, although all were probably watching me intently within a radius of ten feet. The call-notes of these Golden-crests resemble closely those of the Creepers.

62. *Regulus calendula grinnelli*.¹ SITKAN KINGLET.—This Kinglet was not very common, and I only observed it along Indian River in the tract of tall firs. Their beautiful song could frequently be heard during June and the first part of July from the upper foliage of the dense fir-trees, where the birds were exceedingly hard to locate. I saw them in pairs on two occasions, but I secured no young. This Kinglet doubtless breeds, though not in abundance. Three adult males were secured.

63. *Turdus ustulatus*. RUSSET-BACKED THRUSH.—Tolerably common along Indian River and on some of the small islands in the bay. No young were obtained but they certainly breed. Their beautiful songs were heard until the middle of July.

64. *Turdus aonalaschæ*. DWARF HERMIT THRUSH.—Very common everywhere, especially on the small wooded islands. At low tide they were frequently to be seen feeding among the kelp and rock-weed along the shores. The first young were taken July 2, and young only half-fledged were taken on August 15. The song of this Thrush is most exquisite. Mr. Palmer informs me that one of my specimens approaches *T. a. auduboni* quite closely.

65. *Merula migratoria propinqua*. WESTERN ROBIN.—A few adults were observed throughout the summer among the more open parks three or four miles inland from Sitka along Indian River. Several large flocks of juveniles appeared on July 25, and were thenceforth common.

¹ Wm. Palmer, Auk, XIV, Oct. 1897, p 399.

66. *Hesperocichla nævia*. VARIED THRUSH. — Tolerably common in the deeper woods; first young, scarcely feathered, taken on July 2. By August 1, the young began to gather in considerable numbers and together with the Robins and other Thrushes were feeding on the blueberries.

THE SUMMER BIRDS OF THE WEST VIRGINIA SPRUCE BELT.

BY WILLIAM C. RIVES, M. D.

THE portion of the mountain region of the Virginias to which the present paper relates, is spoken of in the following terms in an amusing sketch in 'Harper's Magazine' for December, 1853 (Vol. VII, p. 18). "In Randolph county, Virginia, there is a tract of country containing from seven to nine hundred square miles, entirely uninhabited, and so inaccessible that it has rarely been penetrated even by the most adventurous. The settlers on its borders speak of it with dread, as an ill-omened region, filled with bears, panthers, impassable laurel brakes and dangerous precipices. Stories are told of hunters having ventured too far, becoming entangled, and perishing in its intricate labyrinths." Its features are also depicted in a volume called 'The Blackwater Chronicle' (New York, 1853), which treats of a hunting trip to the locality in question, and a brief allusion will be found in 'Picturesque America,' Vol. I, pp. 390, 391. It is now partly within the limits of Tucker County, and forms, or we shall soon be obliged to say formed, a part of the black spruce belt of West Virginia. "It is probable," says Major Hotchkiss, an authority on the natural resources of the Virginias, "that nowhere in the United States are now existing denser forests than those of black spruce in the belt of country, more than 100 miles in length and from 10 to 20 in breadth, that extends through Greenbrier, Pocahontas, Randolph and Tucker Counties. Only the northern end of this vast spruce forest has been penetrated by railways, the